# PROPOSAL EVALUATION

## *Proposition 84 Integrated Regional Water Management (IRWM) Grant Program*

## *Implementation Grant, Round 1, FY 2010-2011*

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| **Applicant** | Rancho California Water District | **Amount Requested** | $4,332,008 |
| **Proposal Title** | Upper Santa Margarita Watershed (USMW) Planning Region IRWM Proposition 84 Round 1 Implementation Proposal | **Total Proposal Cost** | $21,473,088 |

**PROPOSAL SUMMARY**

This proposal consists of five projects: (1) Vail Lake Stabilization, (2) Agriculture Irrigation Efficiency, (3) Hydroelectric Power Generation, (4) Water Quality Enhancements in Riverside County, and (5) Nutrient Management in the Santa Margarita River.

**PROPOSAL SCORE**

| Criteria | Score/Total Possible | Criteria | Score/Total Possible |
|---|---|---|---|
| Work Plan | **6/15** | Economic Analysis – Water Supply Costs and Benefits | **9/15** |
| Budget | **3/5** | Water Quality and Other Expected Benefits | **6/15** |
| Schedule | **3/5** | Economic Analysis – Flood Damage Reduction | **3/15** |
| Monitoring, Assessment, and Performance | **2/5** | Program Preferences | **8/10** |
| | | **Total Score (max. possible = 85)** | **40** |

**EVALUATION SUMMARY**

The following is a review summary of the proposal.

### Work Plan

The criterion is marginally addressed and documentation is incomplete or insufficient. The proposal attempts to address critical watershed needs that implement regional and interregional planning and implementation of the USMW planning region goals, objectives, and programs. The proposal represents significant coordination between the USMW planning region and other IRWM planning regions in the funding area via the Tri-County Funding Area Coordinating Committee (FACC).

The proposal documents IRWMP goals and objectives and lists which project directly or indirectly implements each. The proposal includes maps for each project, but some maps do not provide important information (Example: Project 1; location of site restoration work, or Project 4, location of development to be assessed or its proximity to waterways). A discussion is included on how the suite of projects establishes synergies and linkages between projects, but some of the explanations for linkages are not clear.

It does not seem feasible that three of the five projects can be implemented. Project 2 in Task 3 states that "detailed water budgets" will be conducted using updated Geographic Information System (GIS) imagery and infrared data, but does not explain how this information will allow for a water budget calculation. Also, there is no discussion about if additional water budget input data is needed or would be attained, nor how they plan to secure property owner approval to survey and develop water budgets for 1,724 private agricultural operations. Project 4 lacks clarity on how priority sites for hydro-modification would be identified (what assessments would be performed) and what constitutes a retrofit. Project 5 proposes to develop specific Water Quality Objectives (WQOs) and Nutrient Numeric Endpoints (NNE) through the creation of a stakeholder workgroup to evaluate ongoing and needed technical studies and data gaps analysis. The proposal does not address how this interregional project, which relies on the award of two separate IRWM grants, would be completed if only one region receives funding.

Three projects lack scientific/technical information to justify the ability for the projects to address water resource issues. Project 3 proposes to construct a power generation facility on an existing imported water turnout for power generation. Project 4 contains no specific information of the current status of stream habitats in need of protection, nor baseline information on the extent that existing development has adversely affected the streams. Project 5 states that the need for the project is to develop site specific WQOs for the Santa Margarita River and watershed, which are more appropriate to protect water quality than the "problematic" WQOs currently used to protect water quality by the regional water quality control board. It is not clear why the NNE framework, reported to still be in development stages, would result in water quality benefits for the watershed, nor how these benefits would be measured.

**Budget**

The Proposal has detailed cost information as described in Attachment 4, but not all costs appear reasonable, and supporting documentation is insufficient for a majority of the items shown. The items in the project budgets generally agree with the tasks provided in the work plan. Detailed budget tables for construction projects (Project 1 and 3) are provided. No detail is provided in the Construction/Implementation section of Project 2 to substantiate how they arrived at the pre-retrofit audit cost of $500 and the post-retrofit audit at $350, or how they arrived at a total costs for retrofit incentives of $800,000 by using a labor component (2,000 hours at $400/hr). This is not consistent with the work plan, which stated that the incentives will be based on "approved" equipment cost. The consultant's budget for planning/design of Project 3 has indirect expenses assigned to each task, totaling $14,900, yet there is no information that relates the cost to particular work. The first line item in Project 3, task 3 claims 600 hours at an hourly rate of $75-$220/hr for a total cost of $102,000; whereas, after adding up the breakdown of consultant classifications and hours provided in the footnote, the total is $60,220. The consultant budget for Project 4, task 3, shows 1920 hours to "prepare materials", with hourly rates ranging between $14.50 - $19.50/hour; the footnote relating to this item is missing. The Project 5 budget does not adequately discuss how they arrived at the regional funding split, as the footnoted amounts on the Project 5 summary budget is not consistent with narrative discussion on the same page. Table BB does not provide any basis for the $40,895 lump sum line item stating "Laboratory analysis, supplies and travel."

## Schedule

Three projects that involve construction or installation (Projects 1, 2, and 3) anticipate a readiness to begin construction or installation between 6 to 12 months after the grant agreement. The schedules generally correspond to the tasks in the work plan. The timing of Project 2 does not sound reasonable. The proposal states that they will begin the procurement process in July 2011 to obtain agricultural retrofit equipment, begin site identification in October 2011, start pre-retrofit evaluations in November 2011, and begin post-retrofit evaluations in January 2012.The Project 3 schedule also seems unreasonable in that final report is scheduled for completion nine months before construction is completed. It seems overly ambitious that the Project 1 work plan tasks 3.2 (assessment of chlorination/dechlorination dosing rates and detention times), 3.3 (conceptual plan), and 3.4 (preliminary design) will all be completed in only one month as noted in the schedule.

## Monitoring, Assessment, and Performance Measures

The criterion is marginally addressed and documentation is incomplete and insufficient. It is not always clear how metrics are quantitative, relevant, or adequate. For instance, Project 1 proposes to measure natural flows and track groundwater pumping, yet, the project does not affect the natural flows to the lake, nor are there any targets for groundwater pumping. The measurement tool for determining a water budget proposed in Project 2 seems insufficient for this purpose ("GIS imagery software and infrared data used for determining irrigated acreage and crop type…."). Some of the targets for Project 3 are already achieved and not relevant to the benefit the project adds (reliable delivery of base flows, steady groundwater levels along the Santa Margarita River). Project 3 includes a metric target for the amount of energy generated, and the resulting revenue increase to support a goal of creating a reliable, new, clean energy source, but nothing about how much the project would contribute (percent increase) in overall embedded energy efficiency gain. Outcome indicators for Project 4 and Project 5 often inappropriately consist of a report. The narrative descriptions of the monitoring program for Project 4 and Project 5 are inadequate.

## Economic Analysis – Water Supply Costs and Benefits

Above average levels of benefits relative to costs can be realized through this proposal; however, the quality of the analysis is moderate and supporting documentation is partially substantiated. Monetized water supply benefits claimed are $73.874 million (M). Most of these benefits ($57.286 M) are associated with Project 1, and most of the remainder is attributed Project 5 ($15.232 M).

Project 1 costs are broken down into costs for a pipeline and pump station, and quagga mussel control facilities. Benefits are based on 4,521 acre feet per year (AFY) of supply. The cost or opportunity cost, and the availability of water to supply this project are both not included. From page 12 of 26 the project "will convey 4,521 AFY of raw-untreated Metropolitan Water District (MWD) water from turnout EM-21 to Vail Lake." Costs for the "discounted rate for raw water" were missing. It may be discounted, but it is not zero. The benefit is based on the cost of MWD Tier 2 water, ranging from $851 to $919 per AFY; this seems acceptable, but costs should include the raw water costs. Replenishment rates are about ½ the Tier 2 treated rate, so if the water is available, benefits might be reduced by ½ to about $28 M. Documentation that supports the availability of this supply would have helped this proposal.

Project 5 is the same project as one that is included in San Diego County Water Authority's (SDCWA) proposal. Both applicants indicate in their budgets that they are expecting funds from the other; that is, each is planning for the other to be awarded. (Santa Margarita p. 4-26, Table 4-33, column c, SDCWA,

Section 4 p. 26 of 31, Table Z, column c.) Even if this project was completely funded, it is a study only. The costs of implementing results of the study are not included. Benefits should be limited to the share of total project costs provided by the proposal, which is no more than 3.5 percent of $15.23 M. About $0.5 M net present value (NPV) of expected benefit can be assigned to this study.

The remaining monetized water supply benefit is provided by the Agricultural Irrigation Efficiency Program. The benefit is based on the cost of MWD Tier 2 water, ranging from $851 to $919 per AFY, with no real increase after 2019.

Claimed benefits must be discounted because 1) neither the feasibility nor the cost of water supply for Project 1 is included, 2) and claimed benefits of the nutrient management project will not be achieved by this project. Benefits of the agricultural efficiency program are reliable but they cover a small share of the proposal cost.

### Water Quality and Other Expected Benefits

Average levels of benefits relative to costs can be realized through this proposal, as demonstrated by the analysis and supporting documentation. Monetized water quality and other qualitative benefits claimed are $3.686 M; Project 3 provides about $2.0 M and Project 2 provides the remainder. Project 3 benefits are hydropower benefits reported in the water supply section. Project 2 counts electricity savings as benefits. This appears to be a double count with water cost savings benefits as electricity cost is the major portion of water cost in this region.

### Economic Analysis – Flood Damage Reduction

Only low levels of benefits relative to costs can be realized through this proposal, as demonstrated by the analysis and supporting documentation. Only Project 4 claims a qualitative flood damage reduction benefit.

### Program Preferences

The proposal addresses six Program Preferences. Specifically for Project 1, the applicant demonstrates a high degree of certainty that those preferences can be achieved. In addition, the proposal lacks thorough documentation for the breadth and magnitude of the Program Preference to be implemented. Projects 1, 2, and 4 address long term drought preparedness, but none address a critical water supply or water quality issue for a Disadvantaged Community (DAC). Other Program Preferences include: Include regional projects or programs, Effectively integrate water management programs and projects within hydrologic region, Contribute to attainment of one or more of the objectives of the CALFED Bay-Delta Program, Use and reuse water more efficiently, and Climate change response actions.